

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1: (Currently Amended) A blood treatment unit for simultaneous extrarenal blood purification therapy and respiration support therapy (15) (60) comprising:

CO<sub>2</sub> removing means (23) having at least a first inlet (25) for receiving a flow of blood for CO<sub>2</sub> removal, and at least a first outlet (45) for the flow of blood deprived of CO<sub>2</sub>; and

filtering means (24) having at least a first inlet (48) for receiving a flow of blood for purification, and at least a first outlet (50) for the flow of purified blood; ~~said blood treatment unit (15) (60) being characterized in that said CO<sub>2</sub> removing means (23) and said filtering means (24) are integrated to form one body. and;~~

at least one drain channel through which a diluting liquid obtained from the blood is expelled during purification of the blood, the drain channel being directly connected to the first inlet of the CO<sub>2</sub> removing means to supply the diluting liquid without submitting the diluting liquid to any filtering treatment during passage along the drain channel.

Claim 2: (Previously Presented) A blood treatment unit (15) as claimed in Claim 1, characterized in that said filtering means (24) are integrated in said CO<sub>2</sub> removing means (23).

Claim 3: (Previously Presented) A blood treatment unit (15) as claimed in Claim 1, characterized in that said first outlet (45) of said CO<sub>2</sub> removing means (23) is connected to said first inlet (48) of said filtering means (24) to supply to the filtering means (24) the blood deprived of CO<sub>2</sub>.

Claim 4: (Previously Presented) A blood treatment unit (15) as claimed in Claim 2, characterized in that said CO<sub>2</sub> removing means (23) comprise an inner seat (40) housing said filtering means (24).

Claim 5: (Previously Presented) A blood treatment unit (15) as claimed in Claim 4, characterized in that said CO<sub>2</sub> removing means (23) comprise a first casing (34) housing a number of membranes (35) for removing CO<sub>2</sub> from the blood.

Claim 6: (Previously Presented) A blood treatment unit (15) as claimed in Claim 5, characterized in that said filtering means (24) comprise a second casing (39) housed inside said first casing (34) and in turn housing a number of blood purifying membranes (46).

Claim 7: (Previously Presented) A blood treatment unit (15) as claimed in Claim 6, characterized in that said membranes (35) for removing CO<sub>2</sub> from the blood are interposed between said first and said second casing (34, 39).

Claim 8: (Previously Presented) A blood treatment unit (15) as claimed in Claim 7, characterized in that said CO<sub>2</sub> removing means (23) comprise a container (40) interposed between said membranes (35) for removing CO<sub>2</sub> from the blood and said second casing (39) and internally defining said inner seat (40).

Claim 9: (Previously Presented) A blood treatment unit (60) as claimed in Claim 1, characterized in that said CO<sub>2</sub> removing means (23) and said filtering means (24) are housed in respective separate casings (34, 39); said casings (34, 39) being joined and fixed rigidly to each other.

Claim 10: (Previously Presented) A blood treatment unit (60) as claimed in Claim 9, characterized in that said casings (34, 39) are heat sealed rigidly to each other.

Claim 11: (Previously Presented) A blood treatment unit (60) as claimed in Claim 9, characterized in that said filtering means (24) are connected rigidly to said CO<sub>2</sub> removing means (23) so as to project outwards from said CO<sub>2</sub> removing means (23).

Claim 12: (Canceled)

Claim 13: (Previously Presented) A blood treatment unit (15) (60) as claimed in Claim 1, characterized in that said CO<sub>2</sub> removing means (23) comprise a second inlet (38) for receiving oxygen; and a second outlet (44) for expelling CO<sub>2</sub> from the blood.

Claim 14: (Currently Amended) A blood treatment unit for simultaneous extrarenal blood purification and respiration support therapy comprising:

CO<sub>2</sub> removing means (23) having at least a first inlet (25) for receiving a flow of blood for CO<sub>2</sub> removal, and at least a first outlet (45) for the flow of blood deprived of CO<sub>2</sub>, and filtering means (24) having at least a first inlet (48) for receiving the flow of blood for purification, at least a first outlet (50) for the flow of purified blood, the first outlet of the CO<sub>2</sub> removing means connected to the first inlet of the filtering means to supply the filtering means the flow of blood deprived of CO<sub>2</sub>;

the CO<sub>2</sub> removing means comprising an inner seat housing the filtering means and a first casing housing a number of membranes for removing CO<sub>2</sub> from the blood,

the filtering means comprising a second casing housed inside the first casing and housing a number of blood purifying membranes,

the CO<sub>2</sub> removing means further comprising a container interposed between the membranes for removing CO<sub>2</sub> from the blood and

and at least one drain channel (47) by which, in use, a diluting liquid obtained from the blood is expelled during purification of the blood; said drain channel (47) being connected to said first inlet (25) of said CO<sub>2</sub> removing means (23) to supply said diluting liquid to the CO<sub>2</sub> removing means (23) without submitting the diluting liquid to any filtering treatment during passage along the drain channel.

Claims 15-20. (Canceled)

Claim 21: (New) A blood treatment method for simultaneous extrarenal blood purification therapy and respiration support therapy, comprising:

providing a blood purification circuit connected to a patient's cardiocirculatory system by two blood feed conduits or catheters, one of which receives unpurified blood from a vein of the patient and supplies the blood to the blood purification circuit, the other of which is

inserted within a vein of the patient to feed purified blood into the patient's cardiocirculatory system; and

passing the blood in the blood purification circuit through CO<sub>2</sub> removing means, the CO<sub>2</sub> removing means comprising:

a first inlet for receiving a flow of blood for CO<sub>2</sub> removal,

a first outlet for providing blood deprived of CO<sub>2</sub>, and

through filtering means connected therebetween, wherein a diluting liquid obtained from the blood, which is expelled during purification of the blood in the filtering means, is supplied to the CO<sub>2</sub> removing means by a drain channel connected directly to the first inlet of the CO<sub>2</sub> removing means without submitting the diluting liquid to any filtering treatment during passage along the drain channel.

Claim 22: (New) The blood treatment method of Claim 21, wherein the CO<sub>2</sub> removing means further comprises a pump for providing a supply of the diluting liquid to the CO<sub>2</sub> removing means through the drain channel at a rate of about 53 ml/min.

Claim 23: (New) The blood treatment method of Claim 21, wherein the blood purification circuit further comprises a pump for pumping the blood at a rate of about 350 ml/min.

Claim 24: (New) The blood treatment method of Claim 21, wherein the CO<sub>2</sub> removing means further comprises a pump for providing a supply of the diluting liquid to the CO<sub>2</sub> removing means through the drain channel at a rate of about 53 ml/min and the blood purification circuit further comprises a pump for pumping the blood at a rate of about 350 ml/min.

Claim 25: (New) The blood treatment unit (15) (60) as claimed in Claim 1, further comprising pumping means connecting the drain channel to the first inlet of the CO<sub>2</sub> removing means to pump the diluting liquid, obtained from the blood by the filtering means, to the CO<sub>2</sub> removing means.